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**GOVERNMENT OF INDIA
TARIFF COMMISSION**

REPORT

On the Continuance of Protection to the Machine Screw Industry

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BOMBAY, 1957

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GOVERNMENT OF INDIA
MINISTRY OF COMMERCE AND INDUSTRY
(DEPTT. OF HEAVY INDUSTRIES)

New Delhi, the 25th October, 1957.

RESOLUTION

Tariffs

No. 18(1) TP /57.—The Tariff Commission has examined the question of continuance of protection to the Machine Screw Industry under Section 11(e) read with with Section 13 of the Tariff Commission Act, 1957 (L of 1951). The Tariff Commission has made the following recommendations :—

- (1) Protection to the machine screw industry should be continued for a further period of two years, that is till 31st December, 1959, at the existing rates of protective duty.
- (2) The Development Wing should try to establish better liaison between the machine screw manufacturers and important consumers of machine screws so as to enable the manufacturers of machine screws to produce screws according to the specifications required by the consumers.
- (3) The existing units which have been manufacturing ordinary types of machine screws and have gained experience in the line may be given opportunities to expand and diversify their capacities before new units are licensed. The Development Wing should also extend adequate assistance to such units to secure the necessary technical know-how, suitable plant and machinery and raw materials for this purpose.
- (4) The Indian Standards Institution should give high priority to the formulation of standards for iron or steel rods and wires for the machine screw industry.
- (5) The Steel Processing Industries Regulations should be suitably amended so as to render possible the allocation of mild steel annealed wire to the machine screw industry from indigenous sources to enable it to work two full shifts daily.
- (6) The Iron and Steel Controller should arrange for supplies of adequate billets for conversion into rods and wires required by the machine screw industry. He should issue quota certificates to machine screw manufacturers on the basis of the Development Wing's recommendation, and also establish a procedure to ensure physical deliveries of the allotted quota in time.
- (7) The Iron and Steel Controller should, in consultation with the Development Wing and the Ministry of Defence, take urgent measures to utilise the spare capacities of rods and wires, if any, with the National Rolling and Steel Ropes

Ltd., and the ordnance factories so that the raw material requirements of the machine screw industry would be taken care of by more than one producer of rods and wires.

- (8) The Railway Administration should try to meet the requirements of the machine screw industry for wagons for the movement of its raw materials and finished products.
- (9) The Government of Punjab should take urgent steps to meet the requirements of Jagatjit Engineering Works for additional electric power.
- (10) The industry should take steps to further diversify its production both in the direction of the manufacture of precision screws and other specialised types of machine screws as well as in the finish of their products according to market requirements.
- (11) The industry should maintain proper accounts and have them audited annually by qualified Chartered Accountants.

2. The Government of India accept the first recommendation. Action will be taken to implement this recommendation.

3. The Government of India have taken note of the other recommendations made by the Tariff Commission. Action will be taken to implement these recommendations in consultation with the organisations concerned.

ORDER

ORDERED that a copy of the Resolution be communicated to all concerned and that it be published in the *Gazette of India*.

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S. RANGANATHAN,
Secretary to the Government of India.

REPORT ON THE CONTINUANCE OF PROTECTION TO THE MACHINE SCREW INDUSTRY

1. The first tariff enquiry into the claim for protection or assistance to the machine screw industry was held by the Tariff Board in 1951. On the basis of the Board's recommendation protection was granted to the industry up to 31st December 1954 by

Origin of the case

levying a protective duty of 31½ per cent. *ad valorem* with effect from the 1st December 1951 on iron or steel machine screws. Subsequently, in consultation with the Tariff Commission, the period of protection was extended up to 31st December, 1955. The second tariff enquiry was held in 1954 and in its report, dated 7th February 1955, the Commission recommended continuance of protection to the industry up to 31st December 1957 by the levy of a protective duty of 50 per cent. *ad valorem* or 9 annas per gross whichever was higher. This recommendation was accepted by Government. The rate of protective duty on iron or steel machine screws was raised, with effect from 23rd August 1955 to 50 per cent. *ad valorem* or 9 annas per gross, whichever was higher and protection was extended up to 31st December 1957 by the Indian Tariff (Second Amendment) Act, 1955. In the Finance Bill (No. 2), 1957, the rate of specific duty has been converted into Naye Paise and the rates of duty proposed are "50 per cent. *ad valorem* or 60 Naye Paise per gross, whichever is higher". The present enquiry was undertaken by the Commission under Section 11(e) read with Section 13 of the Tariff Commission Act, 1951 under which the Commission is empowered to enquire into and report on any further action required in relation to protection granted to an industry with a view to its increase, decrease, modification or abolition according to the circumstances of the case.

2.1. In the first week of April 1957 special questionnaires were issued to all known producers, importers and consumers. A press communique was also issued inviting all parties interested in the industry or in an industry dependent on the use of machine

Method of inquiry

screws to obtain copies of the relevant questionnaires and to submit replies. The associations of producers were addressed for memoranda on the problems facing the industry. A detailed memorandum on the industry was also obtained from the Development Wing. The Iron and Steel Controller was requested to furnish information relating to the arrangements made by him for the allotment and supply of mild steel annealed wire to the industry. The Director General of Supplies and Disposals was asked for information about Government purchases of machine screws from indigenous sources, the quality of domestic products, etc. Steps were also taken to obtain the views of the concerned State Governments on problems facing the units manufacturing machine screws in their territories. The Indian Standards Institution was asked for information about the progress made by it in formulating standard specifications for machine screws. Information relating to C.I.F. prices and landed costs for machine screws was obtained from the Collectors of Customs at principal ports. A list of those to whom questionnaires and letters were issued and from whom replies or memoranda were received is given in Appendix I.

2.2. Shri K. R. Damle, Chairman, Shri C. Ramasubban and Shri J. N. Dutta, Members visited the factories of Indian Steel and Wire Products Ltd., Indranagar (Tatanagar) and Jagatjit Engineering Works, Kapurthala on 3rd and 6th June 1957 respectively. Shri Damle, Chairman, Shri Dutta and Shri R. S. Bhatt, Members visited the factory of Guest, Keen, Williams Ltd., Bombay on 14th June 1957. Shri A. K. Gopalan, Assistant Cost Accounts Officer examined the costs of production of machine screws at Jagatjit Engineering Works, Kapurthala and Universal Screw Factory, Chheharta in April 1957. A public enquiry was held on 19th June 1957. A list of persons who attended the enquiry is given in Appendix II. The Commission also held discussions on 29th June 1957 with the Deputy Iron and Steel Controller, Calcutta, and the representative of the Indian Steel and Wire Products Ltd., about the method of allotment and supply of raw materials to the machine screw industry.

3. The recommendations made by the Commission in its 1954 **Implementation of the** report on matters other than tariff and the action **Commission's recom-** taken thereon are briefly indicated below :
mendations on mat-
ters other than tariff

- (a) "Provided there are no serious administrative difficulties, import quotas for machine screws should be fixed on the basis of quantity and value".

With effect from the licensing period January-June 1957 import quotas of machine screws are limited by both quantity and value.

- (b) "Allotment of quotas of mild steel wire to screw manufacturers should be increased so as to meet their requirements on two shift basis".
- (c) "In case there is scarcity of indigenous mild steel wire at any time, licences should be granted to manufacturers to import their requirements of mild steel wire".

The position with regard to both these recommendations is discussed in paragraph 7 below.

- (d) "The Indian Standards Institution should finalise standard specifications for machine screws expeditiously".

We have been informed by the Institution that specification I.S. 886-1956 covering screw threads below 6 mm only has been published. As regards screw threads above 6 mm, it has not been possible to finalise any standard partly because the matter is under consideration by the International Organisation for Standardisation (I.S.O.) and partly because as a result of Government's decision to adopt the metric system the Indian Standards Institution has to revise its earlier proposals. This subject is discussed in paragraph 8.2 below.

4.1. The Tariff enquiry of 1951 was restricted to machine screws made from iron or steel in all kinds of finish, **Scope of the enquiry** with all types of heads and threads and in all sizes. The different types of machine screws were classified under the following heads:

- (i) Countersunk head ;
- (ii) Round head ;

- (iii) Raised or instrument head ;
- (iv) Cheese head ;
- (v) Fillister head ;
- (vi) Mushroom head ;
- (vii) Binding head ;
- (viii) Square head ; and
- (ix) Hexagon head.

At that time the Tariff Board described the characteristics of machine screws as distinct from wood screws and bolts in the following terms :

“Both machine screws and bolts are designed to fit a female thread made otherwise than by their own action. Machine screws are made for use in metallic parts while wood screws are designed for use in wooden articles. Consequently, a machine screw has a uniform shank which is fully threaded up to the head while in the case of wood screws the shank always tapers towards the end and is generally threaded up to two-thirds of its length. A bolt is different from a machine screw in that though its shank is uniform in diameter only a portion of the shank is threaded, leaving the unthreaded collar near the end”.

4.2. At the time of the 1954 enquiry, representations were received to the effect that the above definition had given rise to administrative difficulties as between machine screws and bolts. After full consideration the Commission reached the conclusion that the criterion for distinguishing a machine screw from a bolt should be based mainly on the extent of threading, and decided to include in the scope of the enquiry machine screws made from iron or steel (1) with head, the shank being fully or partly threaded to within two pitches from the head, and (2) without head, the shank being fully or partly threaded.

4.3. In connection with the present enquiry Messrs. Guest, Keen, Williams Ltd., Bombay, suggested in a written memorandum that a more realistic definition of machine screw would be as follows :

“A machine screw has a parallel shank fully or partly threaded, with a countersunk, round, raised, cheese, fillister (raised cheese) or mushroom head”.

It was urged that a machine screw was an article which needed a screw driver for fastening and that it should be distinguished from a bolt which had a square or hexagonal head and was rotated by means of a spanner. The proposed definition excludes (a) machine screws without head and (b) machine screws with square or hexagonal head. This suggestion was discussed at the public enquiry and the consensus of opinion was against restricting the scope of the enquiry and removing machine screws without head or with square or hexagonal heads from the scheme of protection. The scope of the present enquiry covers, therefore, all types of machine screws which the Commission included in its 1954 enquiry.

5. In its Report of 1954 the Commission estimated the current demand of iron or steel machine screws of all types at 6 lakhs gross and expected that the demand might increase by about 10 per cent. every year. This estimate was exclusive of the demand of those establishments which manufactured machine screws for their own consumption. During the present inquiry we have received estimates of demand, both current and future, which vary widely from 1 million gross to 2 million gross for the current year and from 1·30 million gross to 5 million gross for 1960-61. The Development Wing of the Ministry of Commerce and Industry has expressed the view that though it is difficult to estimate the demand for a common fastener like machine screws which are required in almost all engineering industries, the approximate current demand, on the basis of the present trend of consumption in the country, may be placed at not less than 2 million gross per year and that taking into consideration the pace at which consumer industries like bicycles, electric motors and fans, electrical wiring accessories, radio receivers, electricity meters, etc. are developing, this demand may be reasonably expected to go up to 4 to 5 million gross per year by 1960-61. We give below a statement showing the domestic production and imports of machine screws during the last three years :—

(In lakh gross)

Year	Domestic production	Imports		Total
		Tons	Conversion to gross at the rate of 2,000 gross screws a ton	
1954	2·24	169	3·38	5·62
1955	6·70	256	5·12	11·82
1956	13·99	230	4·60	18·59

The figures of production included in the above statement relate to nine units as furnished by them. These figures include all types of machine screws made of iron or steel but exclude the production of small manufacturers and the output of those concerns which manufacture machine screws for their own use. The figures of imports of machine screws, as furnished by the Director-General of Commercial Intelligence, relate to articles which have been declared as machine screws or actually assessed to duty as such. They are, therefore, exclusive of machine screws which were imported as parts of machinery. We were informed that machine screw manufacturers had no difficulty in disposing of their products and that stocks of unsold goods with them were negligible. Taking all relevant factors into consideration, we estimate that the current demand of iron or steel machine screws of all types is about 2 million gross and that the demand may be expected to increase by about 25 per cent. every

year. This demand, both current and future, does not include the demand of those industrial undertakings which manufacture machine screws for their own consumption.

6.1. Producing units.—In 1954 there were seven units engaged in the manufacture of machine screws. Of these, one unit, namely, Vanaz Engineering Co., Ltd., has discontinued production of machine screws. We are informed that during the past three years six more units have been licensed for the manufacture of machine screws of which two have already commenced production. In addition, Guest, Keen, Williams Ltd., (Bombay and Calcutta) which was mainly engaged in the manufacture of roofing bolts and fully threaded bolts, has started production of machine screws on a commercial scale from the middle of 1956. We have received information regarding the year of commencement of production, installed capacity and actual production in respect of nine units and this information is given in Appendix III. Indian Telephone Industries Private Ltd., Bangalore, produces machine screws for its own requirements. Indian Steel and Wire Products Ltd. has been producing, in addition to threaded bolts, hexagonal head fully threaded machine screws, but we have not been able to obtain the figures relating to the capacity of this factory. We are informed that in addition to these producers, there are a number of small producers, ordnance factories and bicycle and electric fan manufacturers who have been manufacturing machine screws either for marketing or for their own requirements. It has not been possible for us to obtain reliable information about their installed capacity and actual production.

6.2. Capacity.—In 1954 the annual rated capacity on single shift basis of the industry was 3,78,500 gross. In the last three years there has been a substantial increase in the installed capacity to 13,68,960 gross per single shift. In addition, the Universal Screw Factory has been granted a licence for expansion of its capacity by 3,00,000 gross per annum on single shift basis, and four new units, which have been granted licences for the manufacture of machine screws will have an aggregate installed capacity of 4,82,000 gross *vide* Appendix III. When these additional capacities are installed the combined capacity of the 13 units will go up to 21,51,860 gross on single shift basis. This figure is exclusive of the productive capacity of ordnance factories, small scale manufacturers, bicycle and electric fan manufacturers and the output of hexagonal machine screws by Indian Steel and Wire Products Ltd.

6.3. Production.—In 1954 the production of seven units was about 2.24 lakhs gross. In the last three years the industry has carried out substantial expansion and increased its production considerably. In 1956 the production of nine units rose to about 1.4 million gross which represented six hundred per cent. increase in the course of three years. The actual figures of production of individual units during the last three years are furnished in Appendix III.

7.1. The principal raw material for iron or steel machine screws
Raw materials is mild steel annealed wire from 14 S.W.G. to 2 S.W.G. The consumable stores required are thread-rolling dies, high carbon steel, slitting saws, tungsten carbide wire drawing dies, lubricants, mill stores and packing materials. All raw materials and consumable stores required

by the industry with the exception of die steel are produced in the country. Most of the machinery required for the manufacture of ordinary types of machine screws is also fabricated in the country but the special equipments needed for the manufacture of precision screws and other specialised types of screws will, we understand, have to be imported.

7.2. Billets for conversion into rods and wires are usually obtained from Tata Iron and Steel Company or Indian Iron and Steel Co., Ltd. Billets of special quality steel which are not manufactured by them are imported. The Iron and Steel Controller arranges the supply of billets to Indian Steel and Wire Products Ltd. or National Rolling and Wire Ropes Ltd. to be converted into rods and wires. Though there are two sources of supply of wires, the industry has not hitherto been in a position to avail itself of the capacity of National Rolling and Wire Ropes Ltd. which we understand, was fully utilised for other requirements. The representatives of the Iron and Steel Controller, however, informed us that it would be possible to arrange for a certain quantity of mild steel annealed wire manufactured by National Rolling and Wire Ropes Ltd. being made available to the machine screw industry when required.

7.3. Machine screw manufacturers obtain supplies of indigenous wire from Indian Steel and Wire Products Ltd., against quota certificates issued by the Iron and Steel Controller. As stated in paragraph 3, we had recommended in our last report that the allotment of quotas of mild steel wire should be increased so as to meet the requirements of manufacturers to work two shifts and that if there was any scarcity of indigenous wire at any time, licences should be granted to manufacturers to import their requirements. We were informed by the Development Wing that it had been recommending the legitimate import requirements of machine screw manufacturers as the availability of indigenous mild steel wires for the machine screw industry became progressively acute during the past three years. The industry has, however, complained of inadequate and delayed deliveries of indigenous steel wires. The representatives of Indian Steel and Wire Products Ltd. informed us that his firm was unable to make prompt deliveries of steel wire to the machine screw manufacturers because the allocation of steel billets by the Iron and Steel Controller and their deliveries by the main producers of steel to his factory were not up to the required quantity.

7.4. With regard to the supply of indigenous wires we were also informed that the allocation to machine screw manufacturers is governed by the Steel Processing Industries Regulations according to which no steel processing factory established after 31st March 1953 is eligible for supply of indigenous steel or steel products. This condition applies equally to any additional capacity installed after 31st March 1953. The result has been that since the installed capacity of the machine screw industry has increased nearly four fold after the last enquiry in 1954 through the establishment of new units and the expansion of units which existed before 31st March 1953, the annual allocation of indigenous steel wire has remained more or less unchanged at about 130 tons per year. Physical deliveries of mild steel wire to the manufacturers were reported to have been even much less, averaging about 50 per cent. of the quota allotted. In view of

the acute shortage of steel wire from domestic sources, the machine screw manufacturers were given licences liberally to import their requirements and we were informed at the public inquiry that the bulk of their requirements was met by imports till the end of 1956. Owing to the present balance of payments situation, however, the position has undergone a change. Since 18th January 1957 the issue of import licences for all categories of steel was, in the first instance, suspended. According to the import policy announced by the Iron and Steel Controller in his Notification No. 101(57)/Vol. II, dated 3rd June 1957, licences for import will generally be restricted to categories/specifications of steel that are not produced in the country. Since mild steel annealed wire of the specifications required by the machine screw industry or the rods from which such wire is drawn are produced in the country, the majority of the units in the indigenous industry will not normally qualify for import of steel from abroad. An exception has been made in favour of units which used to obtain in the past their entire requirements from abroad. Such units may obtain their three months' requirements on the recommendation of the Development Wing. We understand that the units which will qualify under this provision will be one or two like Guest, Keen, Williams Ltd. The large majority of the units which imported only the balance of their requirements that could not be met by domestic supplies would not be in a position to avail themselves of this concession. The crucial problem, therefore, is to ensure adequate supplies of mild steel annealed wire to the industry so as to enable it to increase its production to meet the rising demand for machine screws in the country in the next two or three years. It is evident that until the balance of payment position improves substantially, it will not be advisable to place too much reliance on the supply of raw materials through imports and consequently we are of the view that necessary arrangements should be made to ensure as far as possible adequate supply of steel wire or rods to the machine screw industry from indigenous sources.

7.5. Machine screws are used in fitting metallic parts and equipments in all industries requiring fasteners and fittings. They are required by railways, transport establishments, manufacturers of all kinds of light and heavy engineering goods, like electric motors, fans, transformers, automobiles, aircraft, bicycles, sewing machines, house meters and radio receivers. The demand for machine screws has increased sixfold in the past three years and having regard to the programmes of industrial development under the Second Five Year Plan, we have, as stated in paragraph 5, estimated that the demand will rise by about 5 lakhs gross per year. Machine screws, being vital components of mechanical equipments, should naturally enjoy a high priority in our programme of development. We were informed that for purposes of allocation of supplies of steel wire the machine screw industry has recently been upgraded to category 'A'. This clears the way for arranging supplies of raw materials on a priority basis. However, we understand that so long as the existing provisions of the Steel Processing Industries Regulations remain in force, the industry can be allocated supplies of steel wires only on the basis of its installed capacity as on 31st March 1953. Since there has been a substantial increase in the rated capacity of the industry after that date, these regulations require modification. We, therefore, recommend that the Steel Processing Industries Regulations should be

suitably amended so as to render possible the allocation of mild steel annealed wire to the machine screw industry from indigenous sources to enable it to work two full shifts daily.

7.6. Assuming that one ton of steel wire is required to produce 1,600 gross of machine screws we estimate that on the basis of current domestic demand of 2 million gross a year the demand for steel wire would be about 1,250 tons and with the increase in domestic demand of machine screws to 4 million gross in 1961 the demand for steel wire will correspondingly go up to about 2,500 tons. The billets required for supplying the above quantities of wire are not likely to exceed 1,500 tons in 1957-58 and 3,000 tons in 1960-61. We have discussed this question with the representative of the Iron and Steel Controller as well as with the representative of Indian Steel and Wire Products Ltd. The former has assured us that there will be no difficulty in allotting quotas of mild steel wire to machine screw manufacturers for production on two shift basis. He has, however, urged that since the machine screw industry is given high priority in the supply of steel wires, the manufacturers on their part should utilise the raw material only for the manufacture of machine screws and should place separate indents for machine screws as distinct from wood screws.

7.7. The representative of Indian Steel and Wire Products Ltd. stated that the difficulties in the past regarding supplies of steel wire arose from a number of circumstances, notable amongst which were (i) the absence of any correlation between the quantities authorised by the Iron and Steel Controller's quota certificates and the actual supply of billets, (ii) the absence of any indication in the indents forwarded by manufacturers that the wires were required for the manufacture of machine screws, and (iii) supplies were asked for in odd diameters and not in standard gauges. He urged that the manufacture of wire in odd sizes involved frequent changes of dies and as the quantities asked for were not large, not only was their manufacture uneconomic for producers of wire but their despatch by rail presented difficulties. He suggested that in order to avoid delays in the future the machine screw manufacturers should obtain their requirements in standard gauges of wires with usual tolerances.

7.8. We are satisfied that given a high priority to the machine screw industry it should be possible to arrange supplies of steel wire to the extent of 100 per cent. of the licensed capacity of the industry on two shift basis. Towards this end we recommend that—

(i) The Iron and Steel Controller should arrange for supplies of adequate quantities of billets for conversion into rods and wires to meet the requirements of the machine screw industry.

(ii) The Iron and Steel Controller should issue quota certificates to machine screw manufacturers on the basis of the Development Wing's recommendation, and also establish a procedure to ensure physical deliveries in time of the allotted quota. For implementing the above two recommendations, the Development Wing would require to make quarterly assessments of the quantities of rods and wires required by each individual unit in the industry on two shift basis, and forward its recommendations to the Iron and Steel Controller. Machine screw manufacturers, on their part, should be asked

to forward indents for rods and wires for the manufacture of machine screws as distinct from those required for the manufacture of wood screws. Undertakings should be obtained from them that supplies made for the manufacture of machine screws will be utilised for that specific purpose. The necessary quarterly returns of the quantities of steel wires and rods received and the quantities of machine screws produced should be called for from the manufacturers by the Development Wing, and these returns should be suitably scrutinised. We also suggest that indents for raw material requirements should be obtained from machine screw manufacturers each quarter and that these indents should be for standard gauges with the usual tolerances. Units which have facilities for drawing wires should be asked to take a portion of their requirement in rods. The recommendations and suggestions made above would require a close watch to be maintained both by the Development Wing as well as by the Iron and Steel Controller over the periodical performances of the units in the industry, and for this purpose we would suggest that the units should be periodically inspected by representatives of the two organizations.

7.9. There was a general complaint that the present arrangement under which the entire supply of indigenous steel wire required by the machine screw industry is programmed for manufacture by one unit, namely the Indian Steel and Wire Products Ltd., was unsatisfactory. It was urged that in the present altered circumstances when the industry would have to depend almost entirely on domestic producers, alternative sources of supply of wires should be established in the country. There are so many factors, such as, strikes, lockouts, breakdown of machinery etc. beyond the control of Indian Steel and Wire Products Ltd., which may affect the Company's output. In such times even with the best intentions it may not be able to fulfil all its commitments. We have stated in paragraph 7.1 that National Rolling and Steel Ropes Ltd. is equipped to convert billets into wires. We also understand that some ordnance factories have spare capacity for drawing wires. We recommend, therefore, that the Iron and Steel Controller should, in consultation with the Development Wing and the Ministry of Defence, take urgent measures to utilise those capacities so that the raw material requirements of the machine screw industry would be taken care of by more than one producer of rods and wires.

7.10. Representations were also made by producers to the effect that the quality of wires supplied by Indian Steel and Wire Products Ltd. was inferior to the imported product. This is perhaps due to the absence of standard specifications for wires and wire rods required for machine screws. Having regard to the importance of the industry to our economy, we recommend that the Indian Standards Institution should give high priority to the formulation of standards for iron or steel wire rods and wires for the machine screw industry.

8.1. The general testimony furnished in the written statements and at the public enquiry was that the quality of the domestic product has considerably improved after the last enquiry. The Development Wing has expressed the opinion that the quality of the indigenously produced machine screws is as good as that of imported machine screws. Some of the automobile

Quality of the indigenous product

manufacturers, the Bombay Port Trust and the Controllers of Stores of the Western and the North Eastern Railways have stated that the quality of indigenous machine screws compares well with that of the imported products. However, there was a complaint from Hindustan Aircraft Private Ltd. who stated that the quality of domestic products left much to be desired. This company also cited an instance of a recent supply of 2,000 gross of machine screws of which 1,500 gross had to be rejected because the diameter was not according to its specifications. No representative of the company attended the inquiry. We were, however, informed by the representatives of manufacturers that the screws required by Hindustan Aircraft were of a special type and that the screws rejected were replaced by the producer. The manufacturers informed us that they had taken steps to improve the quality of their products by the installation of additional machinery and that they have maintained the quality of their machine screws.

8.2. We are satisfied that the quality of the indigenous machine screws is generally satisfactory. It is, however, noticed that some of the consumers continue to import machine screws, which can be manufactured in the country, as proprietary parts or components of machines at lower rates of duty. These imports involve avoidable expenditure of foreign exchange and loss of customs revenue. This situation would have been remedied to a large extent if there were Indian Standard Specifications for various types of machine screws. We have already stated in paragraph 3 that the work of the Indian Standards Institution in this line suffers delay on account of the impending changeover to the metric system. In the circumstances, we would recommend that the Development Wing should try to establish better liaison between the machine screw manufacturers and important consumers of machine screws so as to enable the manufacturers of machine screws to produce screws according to the specifications required by the consumers.

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9.1. The Tariff Board in its Report of 1951 had recommended that the industry should take steps to diversify its production by undertaking the manufacture of such varieties of machine screws as were not produced at that time. Since then there has been an expansion in the range and the variety of indigenous machine screws but we are informed that there are a number of machine screws which fall within the category of precision screws and other specialised types and are not manufactured in this country. They have therefore, to be imported from abroad. This question was discussed at the public enquiry. Universal Screw Factory and Jagatjit Engineering Works informed us that they were producing machine screws with chromium, nickel and zinc plating and selling them to their established customers. They also claimed to have capacity for the manufacture of oxidized and other types of plated screws and offered to produce them against reasonably large orders. Guest, Keen, Williams Ltd. has also recently installed a plant for cadmium, nickel and zinc plating. The Development Wing has, however, expressed the view that the manufacturers have not paid sufficient attention to the diversification of their production in various finishes like nickel-plated screws, electro-brassed, electro-coppered and oxidized

finishes. Those not manufactured in the country also include precision screws, and other specialised types of screws like high tensile screws, rocket head, cap head and knurled head machine screws and special metal thread screws like self-tapping screws and stainless steel screws. We were informed by the representative of Guest, Keen, Williams Ltd. that his factory at Calcutta manufactured high tensile screws for automobiles and diesel engines and they had the equipment to produce stainless steel screws also. He also stated that his firm had plans to instal additional equipment for the manufacture of socket screws but this will take a minimum period of three years to materialise. We were further informed that socket screws were at present manufactured on a limited scale by some firms in Calcutta and Bombay. We have not been able to obtain precise information about their installed capacity or actual production. We suggest that the Development Wing should make the necessary inquiries and collect reliable information about their capacity and production. The representatives of Universal Screw Factory and Jagatjit Engineering Works stated that they would be prepared to undertake the manufacture of high tensile screws, stainless steel screws, self-tapping screws, etc. provided they were assured of the supply of suitable raw materials and reasonably large orders. We are informed that a unit, Rambal Ltd., Madras, has been granted a licence specifically to manufacture precision screws for house service meters and radio receivers and we understand that this unit is likely to go into production within a period of two or three months provided suitable raw materials are made available to it. There is, however, considerable scope for development in this line for we understand that the demand for precision and other specialised types of screws in the country is fairly substantial and is likely to increase in future. We, therefore, recommend that the industry should take steps to further diversify its production both in the direction of the manufacture of precision screws and other specialised types of machine screws as well as in the finish of their products according to market requirements.

9.2. The combined installed capacities which are in commission and those which have already been licensed are in our view adequate to meet the current and potential demands of the usual types of machine screws. But we have found that additional capacity will have to be installed for the manufacture of precision screws and other types of specialised screws which require specialised equipments, technical knowledge and skill of a high order. In view of this, if Government decide to license additional capacity for the manufacture of those types of screws, we recommend that the existing units which have been manufacturing ordinary types of machine screws and have gained experience in the line may be given opportunities to expand and diversify their capacities before new units are licensed. We also recommend that the Development Wing should extend adequate assistance to such units to secure the necessary technical know-how, suitable plant and machinery and raw materials for this purpose.

10.1. The policy pursued by Government since January 1954 in regard to the import of machine screws is that during each of the licensing periods from January-June 1954 to July-December 1956, the quota of established importers for import from soft

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currency areas was limited to 12½ per cent. of half of their best year's imports. It was reduced to 10 per cent. during the licensing period January-June 1957 and licences were also issued subject to both quantity and value as limiting factors. During all these periods quota licences were valid for import of set screws also. During July-September 1957 no fresh licences are issued.

10.2. A statement showing country-wise imports of machine screws during 1954-55, 1955-56 and the first six months of 1956-57 is given in Appendix IV. It is noticed that the bulk of imports came from Japan, U.K. and West Germany.

11. Iron and Steel machine screws are at present assessed to duty under item No. 63(33) (b) of the First Schedule to the Indian Tariff Act, 1934. The relevant extract from the Schedule, as modified by the Finance Bill (No. 2), 1957 is, reproduced below :

Item No.	Name of article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective rates of duty
				The United Kingdom	A British Colony	Burma	
63(33)	Iron or Steel screws						
	(b) machine screws	Protective	50 per cent. <i>ad valorem</i> or 60 Naye Paisa, whichever is higher.	..	..	..	December 31, 1957.

12.1. Our Assistant Cost Accounts Officer examined the costs of production of two units, namely, Universal Screw Factory, Chheharta and Jagatjit Engineering Works, Kapurthala. The periods selected for costing were the year ended 31st March 1957 in the case of Jagatjit Engineering Works and the year ended 31st August 1956 in the case of Universal Screw Factory. These two units produce machine screws of various types and sizes. The actual costs of production have been worked out for the following sizes which are most in demand :—

3/16" × 1/2"; 3/16" × 3/8"; 3/16" × 3/4"; 3/16" × 1"; 1/4" × 3/4"; 1/8" × 3/8" and 1/8" × 1/4".

The above sizes are taken as representative for estimating the future costs and for comparing fair ex-works prices with the landed cost ex-duty of imported types to determine the quantum of protection required by the industry. As the manufacturers desire that the details of their costs of production should be kept confidential, we are forwarding the report of the Assistant Cost Accounts Officer as a separate enclosure to this report.

12.2. The actual costs of Jagatjit Engineering Works and Universal Screw Factory were based on a production of 344,000 and 620,497 gross machine screws respectively. The estimates of future costs of production are based on a production of 5 lakh gross in the case of Jagatjit Engineering Works and 8 lakh gross in the case of Universal Screw Factory.

12.3. In our estimates of costs for the future, the following further adjustments have been made:—

- (i) The latest control prices of steel wire which came into effect from 25th May, 1957 as well as the raised duty on imported wires have been adopted.
- (ii) Wastage of materials in the process of manufacture has been allowed at 5 per cent. on the weight of finished product.
- (iii) Both the units manufacture wood screws as well as machine screws. The manufacturing process is not the same in the two cases, and there are differences in tool maintenance and operational details. In determining the conversion cost for machine screws a weightage of 15 per cent. is given after taking into consideration all the relevant factors in the manufacturing process of the two types of screws.

12.4. In our estimates of fair ex-works price, interest on working capital has been allowed at $5\frac{1}{2}$ per cent. on an amount equivalent to 4 months' cost of production. Return on block has been allowed at 10 per cent. on the original value of the fixed assets utilised for machine screws. A statement of the estimates of future ex-works prices for the seven sizes of machine screws is given on the following page.

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12.5. For estimating the average cost of production we have taken a simple average of the costs of the two factories, as they do not show a wide variation. On this basis, the average fair ex-works price of different sizes of machine screws works out to :—

(Value in Rs. per gross.)

Sizes : Diameter × Length	Fair ex-works price for		Average
	Jagatjit Engineering Works	Universal Screw Factory	
	Rs.	Rs.	Rs.
3/16" × 1/2"	0.969	0.877	0.92
3/16" × 3/8"	0.916	0.848	0.88
3/16" × 3/4"	1.064	0.989	1.03
3/16" × 1"	1.160	1.088	1.12
1/4" × 3/4"	1.524	1.467	1.50
1/8" × 3/8"	0.732	0.654	0.69
1/8" × 1/4"	0.710	0.625	0.67

13. The c.i.f. prices of machine screws obtained from Collectors of Customs and importers are given in Appendix V. Western India Hardware Mart, Bombay, has also furnished us with quotations of c.i.f. prices of machine screws of Japanese origin for the types for which fair ex-works prices are shown in the statement above except for size $\frac{1}{4}$ " × $\frac{3}{4}$ ". These prices represent the lowest quotations and we have adopted them for purposes of comparison with the fair ex-works prices of indigenous manufacturers because severe effective competition is expected from Japanese sources in future.

14. Comparison of the average fair ex-works prices of the selected varieties of machine screws of Jagatjit Engineering Works and Universal Screw Factory with the landed costs without duty of comparable Japanese machine screws is shown in the table appended below. In order to make the comparison fair, we have added Rs. 0.06 per gross to the ex-works prices of screws of indigenous manufacture to cover the disadvantage on account of railway freight from the factories at Amritsar and Kapurthala to the main consuming centres in the country.

A comparison of the average fair ex-works prices of the selected varieties of machine screws of the Jagajit Engineering Works and the Universal Screw Factory with the landed cost without duty of the Japanese Machine Screws.

	Dia. × Length 3/16" × 1/4"			Dia. × Length 3/16" × 3/8"			Dia. × Length 3/16" × 1"			Dia. × Length 1/4" × 3/4"			Dia. × Length 1/8" × 3/8"			Dia. × Length 1/8" × 1/4"		
	Rs.			Rs.			Rs.			Rs.			Rs.			Rs.		
Fair Ex-works price per Gross		
Average Freight disadvantage		
(a) Total		
(b) C. i. f. prices per gross for imports from Japan		
(c) Clearing charges		
(d) Total Landed Cost without duty (b+c)		
(e) Difference (a--d)		
(f) Difference (e) as a percentage on (b) the c.i.f. price.		
Existing Rate of Duty 63 (33) (b)		
Or Per Gross Rs.		

The existing levy of Rs. 0.60 per gross is adequate to cover this difference between fair ex-works price and Landed Cost without duty.

*Suitable c. i. f. price not available.

The table above would indicate that the protective duties required to equate the fair ex-works prices plus freight disadvantage of indigenous screws with the landed costs without duty of imported Japanese screws range from 45.0 to 236.4 per cent. for the different sizes whereas the actual absolute differences between them range between Rs. 0.36 to Rs. 0.52 per gross. The simple average of these rates comes to 104.7 per cent. *ad valorem* and 52 Naye Paise per gross respectively.

15. It would appear from the preceding paragraph that a duty of 104.7 per cent. *ad valorem* or 52 Naye Paise is required to place the domestic product on equal footing with similar imported product. The current rate of duty is 50 per cent. *ad valorem* or 60 Naye Paise, whichever is higher. The industry is now in a comfortable position as imports of machine screws are severely restricted on balance of payment considerations. That by itself cannot be considered as a valid reason to withdraw protection from the industry. Firstly, though the domestic industry could meet about 75 per cent. of the domestic demand for machine screws, it has still to undertake the manufacture of precision screws and other specialised types of screws. Secondly, with the expansion and diversification of engineering industries, the machine screw industry will also have to expand and diversify its production and undertake additional investment. Thirdly, competition from imported foreign screws will reappear as soon as import restrictions are relaxed. Fourthly, any protection granted to the industry is not likely to place an undue burden on consumers as there is sufficient competition between the various units in the industry to compel the manufacturers to keep the prices at a reasonable level and also to maintain quality. After careful consideration we recommend that protection to the industry should be continued for a further period of two years, that is, till 31st December 1959 at the existing rates of protective duty.

16.1. *Maintenance of proper accounts.*—We have found that the two units, Universal Screw Factory and Jagatjit Engineering Works whose accounts were examined for the purpose of investigating the cost of production, have not maintained the cost data in sufficient detail nor were their accounts audited. In consequence, our Assistant Cost Accounts Officer experienced considerable difficulty in determining the costs of raw materials and conversion charges for different types of machine screws. We understand that industrial units which are public or private limited companies are required, under the provisions of the new Companies Act 1956, to maintain accounts and have them duly audited and published in accordance with the forms prescribed. Proprietary concerns are, however, under no such obligation to maintain their accounts according to accepted accounting principles nor are they required to have them audited. In our view all units in a protected industry, irrespective of their form of management, have certain obligations to the public at whose expense they enjoy protection. The public has a right to demand that a protected industry does not abuse its privileged position by adopting wasteful methods, charging high prices or otherwise. To ensure this, it is necessary to require the industry to maintain its accounts according to accepted principles of accounting and to get them audited by

qualified Chartered Accountants. We recommend that the industry should maintain proper accounts and have them audited annually by qualified Chartered Accountants.

16.2. *Supply of electric power.*—In our report on the Wood Screw Industry early this year we have recommended that the State Government concerned should give Jagatjit Engineering Works, Kapurthala reasonable priority in the allocation of electric power. We understand that this unit is unable to make the maximum use of its capacity to manufacture machine screws for want of adequate supply of electric power. The need for higher production at the present juncture cannot be too strongly emphasised. We recommend, therefore, that the State Government should take urgent steps to meet the requirements of Jagatjit Engineering Works for additional electric power.

16.3. *Transport difficulties.*—The representatives of Universal Screw Factory and Jagatjit Engineering Works complained of difficulties in obtaining railway wagons for movement of machine screws. They also complained of difficulties in transporting imported steel wire from Bombay to the factory sites in the Punjab. We have advised them to take up the matter with the railway administration concerned. As machine screws form an essential component for a large number of engineering industries, we recommend that the Railway Administration should try to meet the requirements of the machine screw industry for wagons for the movement of its raw materials and finished products.

17. Our main conclusions and recommendations are summarised
Summary of conclusions and recommendations below :—

(1) The Steel Processing Industries Regulations should be suitably amended so as to render possible the allocation of mild steel annealed wire to the machine screw industry from indigenous sources to enable it to work two full shifts daily.

[Paragraph 7.5]

(2) The Iron and Steel Controller should arrange for supplies of adequate billets for conversion into rods and wires required by the machine screw industry. He should issue quota certificates to machine screw manufacturers on the basis of the Development Wing's recommendation, and also establish a procedure to ensure physical deliveries of the allotted quota in time.

[Paragraph 7.8]

(3) The Iron and Steel Controller should, in consultation with the Development Wing and the Ministry of Defence, take urgent measures to utilise the spare capacities of rods and wires, if any, with the National Rolling and Steel Ropes Ltd., and the ordnance factories

so that the raw material requirements of the machine screw industry would be taken care of by more than one producer of rods and wires.

[Paragraph 7.9]

(4) The Indian Standards Institution should give high priority to the formulation of standards for iron or steel rods and wires for the machine screw industry.

[Paragraph 7.10]

(5) The Development Wing should try to establish better liaison between the machine screw manufacturers and important consumers of machine screws so as to enable the manufacturers of machine screws to produce screws according to the specifications required by the consumers.

[Paragraph 8.2]

(6) The industry should take steps to further diversify its production both in the direction of the manufacture of precision screws and other specialised types of machine screws as well as in the finish of their products according to market requirements.

[Paragraph 9.1]

(7) The existing units which have been manufacturing ordinary types of machine screws and have gained experience in the line may be given opportunities to expand and diversify their capacities before new units are licensed. The Development Wing should also extend adequate assistance to such units to secure the necessary technical know-how, suitable plant and machinery and raw materials for this purpose.

[Paragraph 9.2]

(8) Protection to the machine screw industry should be continued for a further period of two years, that is till 31st December 1959 at the existing rates of protective duty.

[Paragraph 15]

(9) The industry should maintain proper accounts and have them audited annually by qualified Chartered Accountants.

[Paragraph 16.1]

(10) The Government of Punjab should take urgent steps to meet the requirements of Jagatjit Engineering Works for additional electric power.

[Paragraph 16.2]

(11) The Railway Administration should try to meet the requirements of the machine screw industry for wagons for the movement of its raw materials and finished products.

[Paragraph 16.3]

18. We wish to express our thanks to the manufacturers, importers and consumers who furnished us with valuable information and to their representatives who gave evidence before us.

Acknowledgements

K. R. DAMLE,

Chairman,

C. RAMASUBBAN,

Member.

J. N. DUTTA,

Member.

R. S. BHATT,

Member.

RAMA VARMA,

Secretary.

BOMBAY ;

Dated 12th August, 1957.



APPENDIX

(Vide paragraph 2·1)

List of firms, bodies and Government departments to whom the Commission's questionnaires/letters were issued and from whom replies or memoranda have been received

* Indicates those who sent their replies/memoranda.

@ Indicates those who are not interested.

PRODUCERS :

1. A.T. Kumar, Netaji Subhas Road, Calcutta.
- *2. Asiatic Engg. Industries, 138, Canning St., Calcutta.
- *3. Badhwar & Co., G. T. Road, Delhi-Shahdra.
- *4. Bengal Screw Mfg. Co., Ltd., 2, Clive Road (4th Floor), Calcutta.
- *5. Bombay Brass & Engineering Works, Nakodar Road, Jullundur City.
- *6. Dun Aluminium Factory, 225/7, Tardeo Road, P.O. Box 4975, Bombay.
- @7. Gujarat Textile Co., Manek Chowk, Ahmedabad.
- *8. Guest, Keen, Williams Ltd., Wakefield House, Sprrott Road, Ballard Estate, Bombay-1.
- @9. Gun and Shell Factory, Cossipore, West Bengal.
10. Hind Bobbin Industries Ltd., Kamla Nehru Road, Bulsar.
- @11. Hind Wire Industries Ltd., P. 16, Kalakar Street, Calcutta.
12. Indian Engineer's Corporation Ltd., O/s. Chatiwind Gate, Canal Bridge, Amritsar.
- *13. Indian Telephone Industries Ltd., Durakvani Nagar, Bangalore District.
- *14. Jagatjit Engineering Works, Kapurthala.
15. Jai Krishna Das, The Ivory Palace, Juma Masjid, Delhi.
- @16. K.B. Engineering Co. Ltd., Sultanwind Road, Amritsar.
- @17. Metalford Industries, Glass Factory Road, Bagad Gunj, Nagpur.
18. National Engineer's Corporation, Sultanwind Road, Amritsar.
- @19. National Industries, Sultanwind Road, Amritsar.
- @20. National Screw and Wire Products Ltd., Stephen House, 4 Dalhousie Square, Calcutta.
- @21. Northern India Steel Works Ltd., Verka, Amritsar.
22. Shree Jam Wire Products Co. Ltd., P.B. No. 48, Bedi Port Road, Jamnagar.
23. Suvina, 18 Rajendra Park, New Delhi.
24. Tarrington Traders, Parsi Panchayat Road, Andheri East, Bombay.
- *25. Universal Screw Factory, Chheharta, Amritsar.
- *26. Victor Industries, Sultanwind Road, Amritsar.
27. West Bengal Industries, Baranagar, Calcutta.
- *28. Southern Industrial Corpn. Ltd., 2, Armenian Street, Madras.
- *29. Rambal (Private) Ltd., 32/1, Usman Road, Madras-17.

PRODUCER'S ASSOCIATIONS :

1. Punjab Screw Mfrs.' Association, Sultanwind Road, Amritsar.
2. Screw Manufactures Association, India Exchange (7th Floor), Calcutta.

RAW MATERIAL SUPPLIERS :

- *1. The Indian Steel & Wire Products Ltd., Indranagar, P.O., Jamshedpur-8.
- *2. The National Rolling and Steel Ropes Ltd., Stephen House, 4, Dalhouse Square, Calcutta.

IMPORTERS :

- 1. Batliboi & Co., Forbes Street, Fort, Bombay.
- 2. Bombay Belting Co., Ltd., 71-A, Netaji Subhas Road, Calcutta.
- 3. P.C. Coomar & Sons (Hardware) Ltd., 145, Netaji Subhas Road, Calcutta.
- 4. Lekhraj Devraj & Co., Narayan Dhuru Street, Bombay.
- @5. East Asiatic Co. (India) Private Ltd., Wavell House, Graham Road, Ballard Estates, P.B. No. 689, Bombay.
- @6. Nettlefold of India Ltd., Das Chambers, 25, Dalal Street, P.B. No. 1502, Bombay-1.
- 7. William Jacks & Co. Ltd., Hamilton House, Ballard Estate, Bombay.
- 8. Maniklal & Co., 166, Hornby Road, Fort, Bombay.
- @9. Capstan Wire Products (Private) Ltd., 34, Netaji Subhas Road, Calcutta.
- *10. P.B. Shah & Co. Ltd., 34, Netaji Subhas Road, Calcutta.
- 11. Steel Merchant's Syndicate Ltd., 153, Narayan Dhuru Street, Bombay.
- 12. Bashimal Tirathram, 72/74, Bhajipala Lane, Bombay-13.
- 13. Vulcan Trading Co. Ltd., Indian Mercantile Chambers, Nicol Road, Ballard Estate, Bombay-1.
- *14. Western India Hardware Mart, 16, Narayan Dhuru Cross Lane, Bombay-3.
- 15. Associated Exports and Imports Corporation, Eastern Bank Building, Bombay-1.
- *16. Mahabir Export & Import Co., Darya Ganj, Delhi.
- 17. Jagan Nath Bahu Ram, Hauz Quazi, Delhi.
- 18. Gulam Mohiuddin, Gada Bazar, Srinagar.
- 19. Bishambar Nath Balkrishan, Narayan Dhuru Street, Bombay.
- 20. Dewanchand Murlidhar & Sons, Narayan Dhuru Street, Bombay.
- 21. Hajimal Kedarnath, 94, Bhajipala Lane, Bombay.
- 22. Harshadray & Co., Sir P.M. Road, Bombay.
- 23. Wadhaw Ram & Bros., 87, Nagdevi Cross Lane, Bombay.
- 24. Nandlal Sons & Co., Narayan Dhuru Street, Bombay.
- 25. Tarachand Gupta & Bros., Narayan Dhuru Street, Bombay.
- 26. Eshwardas Tillomal & Co., Bibijan Street, Bombay.
- 27. Naraindas Ramchand Das & Co., Nagdevi Cross Land, Bombay.
- 28. C. Prabhu & Co., Argyle Road, Bombay.
- 29. Madanlal Agarwal, Nagdevi Street, Bombay.
- 30. Ramchand Shrinarayan, Narayan Dhuru Street, Bombay.
- 31. Bombay Cycle Tdg. Co., 418, Kalbadevi Road, Bombay.
- 32. Mehta & Co., Iron Market, Bombay.
- 33. Tirathdas Keshoram, 130, Narayan Dhuru Street, Bombay.
- 34. Bashimal Bajjnath, 74, Bhajipala Lane, Bombay.

35. Bashmal Vinod Kumar, Bhajipala Lane, Bombay.
36. Sadhuram & Sons, Khokha Bazar, Bombay.
37. United Importing & Exporting Syndicate, N. Subhas Road, Calcutta.
38. Assam Oil Co., Digboi, Assam.
39. Ramsahai Raj Kumar, Nagdevi Street, Bombay.
40. Maheshdas Sethi & Co., Rajindra Bazar, Jammu-Tawi.
41. Central India Machinery Mfg. Co. Ltd., Birla Nagar, Gwalior.
- @42. Guestr William Private Ltd., Chowringhee Road, Calcutta.
43. Jainson Tdg. Co., Nai Sarak, Delhi.
44. Harjimal Nand Lal, 75, Nagdevi Street, Bombay.
- @45. Linotype & Machinery Ltd., 14, Madan Street, Calcutta.

CONSUMERS:

(i) *Cycle manufacturers:*

1. Atlas Cycle Industries Ltd., Sonapat (Near Delhi).
- @2. Hind Cycles Ltd., 250, Worli, Bombay.

(ii) *Electric goods manufacturers:*

- @3. Bharat Bijlee Ltd., King's Circle, Bombay.
4. Crompton Parkinson (Works) Ltd., Haines Road, Worli, Bombay.
5. Kassela Ltd., Subzi Mandi, Delhi.
- @6. Kirloskar Bros., Ltd., Kirloskar Wadi, Satara District, (Bombay State).
- @7. National Electrical Industries, Ltd., Industrial Estate, Lalbaug, Bombay.

(iii) *Electric fan manufacturers:*

8. Acme Mfg. Co. Ltd., Antop Hill, Wadala, Bombay.
- *9. General Electrical Co. of India Ltd., Magnet House, Chittaranjan Avenue, (South), Calcutta.
10. Kaycee Industries Ltd., Kamani Chambers, Ballard Estate, Bombay.

(iv) *Sewing machine manufacturers:*

- *11. Jay Engg. Works Ltd., 183-A, Prince Anwar Shah Road, Dhakuria, P.O.B. 2158, Calcutta.
- *12. R. L. Seth & Co., Charkhawan, Chawri Bazar, Delhi.

(v) *Transport Companies:*

- @13. George Oakes (Private) Ltd., Swadeshi Mills Compound, New Queen's Road, Bombay.
- *14. Hindustan Aircraft Ltd., Bangalore.
- *15. Hindustan Motors Ltd., 8, Royal Exchange Place, Calcutta.
- *16. Premier Automobiles Ltd., Construction House, Ballard Estate, Bombay-1.

(iv) *Railways:*

17. Secretary, Railway Board, New Delhi.
- *18. Controller of Stores, Western Railway, Churchgate, Bombay.
19. Controller of Stores, Eastern Rly., Calcutta.

- *20. Controller of Stores, South Eastern Railway, Calcutta.
- *21. Controller of Stores, Central Rly., V.T., Bombay.
- *22. Controller of Stores, Southern Rly., Perambur, Madras.
- *23. Controller of Stores, North Eastern Rly., Gorakhpur.
- 24. Controller of Stores, Northern Rly., Baroda House, New Delhi.

(vii) *Others :*

- *25. Bombay Port Trust, Ballard Estate, Bombay.
- 26. Machinery Manufacturers Corporation Ltd., Hall and Anderson Building, Park Street, Calcutta-16.
- 27. Godrej and Boyce Mfg. Co. Ltd., Bombay-12.
- 28. Mohindra Bros, Delhi-6.
- 29. Venus Hardware Stores, Bombay-3.

GOVERNMENT DEPARTMENTS :

- *1. Senior Statistical Officer, Office of the Chief Controller of Imports & Exports, New Delhi.
- 2. The Director General of Supplies and Disposals, Shahjahan Road, New Delhi.
- *3. Iron and Steel Controller, 33, Netaji Subhas Road, Calcutta.
- *4. The Chief Industrial Adviser, Development Wing, Ministry of Commerce & Industry Govt. of India, Shahjahan Road, New Delhi.
- *5. Indian Standards Institution, Delhi.
- *6. The Collector of Customs, Bombay.
- *7. The Collector of Customs, Calcutta.
- *8. The Collector of Customs, Madras.
- *9. The Director of Industries and Labour, No. 1, Rajpur Road, Delhi
- 10. The Secretary to the Govt. of Punjab., Industries Department, Chandigarh.
- *11. The Director of Industries, Madras.
- @12. The Director of Industries, Mysore.
- *13. The Director of Industries & Statistical Authority, Bombay.
- *14. The Director of Industries, Calcutta.

APPENDIX II

(Vide paragraph)

List of person who attended the Commission's public inquiry on 19th June, 1957

Name of the Representative	Name of the firm or Body
PRODUCERS:	
	<i>Representing.</i>
1. Shri D. V. Virmani . . .	Universal Screw Factory, Chheharta, Amritsar.
2. Shri M. L. Kapur . . .	ditto.
3. Shri K. L. Sakhuja . . .	Jagatjit Engineering Works, Kapurthala.
4. Shri I. M. Sakhuja . . .	ditto.
5. Mr. R. A. Binns . . .	Guest, Keen, Williams Ltd., Wakefield House, Sprott Road, Ballard Estate, Bombay.
6. Shri A. E. Domingo . . .	Dun Aluminium Factory, 225/7, Tardeo Road, Post Box No. 4975, Bombay.
7. Shri G. T. Shah . . .	ditto.
8. Shri L. J. Sajnani . . .	Indian Telephone Industries Ltd., Durakvani Nagar, Bangalore.
IMPORTERS :	
9. Shri C. L. Vassa . . .	Western India Hardware Mart, 16, Narayan Dhuru Cross Lane, Bombay-3.
10. Shri T. G. Thakur . . .	Vulcan Trading Co. Ltd., Indian Mercantile Chambers, Nicol Road, Ballard Estate, Bombay.
CONSUMERS :	
11. Shri G. M. Rana . . .	Bombay Port Trust, Ballard Estate, Bombay.
12. Shri A. L. Sequetra . . .	Controller of Stores, Western Railway, Churchgate, Bombay.
13. Shri S. K. Gurnani . . .	Controller of Stores, Central Railway, V.T., Bombay.
GOVERNMENT OFFICIALS :	
14. Shri K. Rajagopalan . . .	Development Wing, Ministry of Commerce and Industry, New Delhi.
15. Lt. Col., O. G. Eapen . . .	Iron & Steel Controller, 33, Netaji Subhas Road, Calcutta.
16. Shri Basu . . .	ditto.
17. Shri A. B. Rao . . .	Indian Standards Institution, 19, University Road Delhi.
18. Shri V. V. Apte . . .	Director of Industries, Govt. of Bombay, Bombay.
19. Shri V. V. Divatia . . .	ditto.
20. Shri A. P. Bhandarkar . . .	Collector of Customs New Customs House, Bombay.

APPENDIX III

(Vide paragraph 6.1)

Statement Showing the year of Commencement of Production, Installed Capacity and Actual Production during the years 1954, 1955 and 1956 of the 9 units Manufacturing Machine Screws

Sl. No.	Name of the unit	date of commencement of production	Rated capacity. Single Shift	Figures in gross		
				PRODUCTION		
				1954	1955	1956
1	2	3	4	5	6	7
1	Badhwar and Co., Delhi-Shahdra	1950	1,44,000	10,731	42,512	52,736
2	Jagatjit Engineering Works, Kapurthala	1944	3,00,000	82,506	1,25,089	2,93,750
3	K.B. Engineering Works, Amritsar	1952	36,000	..	..	1,702
4	Dun Aluminium Factory Private Ltd., Bombay	1951	78,000	8,001	14,988	26,979
5	Universal Screw Factory, Amritsar	1941	6,00,000	1,21,497	3,50,172	6,13,868
6	Victor Industries, Amritsar	1943	6,000	1,289	12,585	7,487
7	Guest, Keen, Williams, Private Ltd., Bombay	1956	1,00,000	Not available	124,685 ¹	3,96,289 ²
8	Bengal Screw Mfg. Co. Private Ltd., Calcutta	1956	1,00,000	..	..	1,969
9	Indian Telephone Industries Private Ltd., Bangalore	1956	4,960	..	..	5,000
TOTAL			13,68,960	2,24,024	6,70,031	13,99,780
1	Southern Industrial Corporation, Madras	*	2,40,000	..	..	..
2	Rambal (Private) Ltd., Madras	*	67,708	..	..	..
3	Delhi Wire Industries, Delhi	*	1,15,200	..	..	..
4	Shri Ram Screw & Metal Industries, Madras.	*	60,000	..	..	..
TOTAL			4,82,908	..	..	..

¹ This relates to the production of fully threaded bolts, machine screws and roofing bolts produced at its Calcutta factory.

² This includes the production of machine screws at its Bombay factory and fully threaded bolts, machine screws and roofing bolts at its Calcutta factory.

*These units have been licensed for manufacture of machine screws under the Industries (Development and Regulation) Act, 1951. They have not commenced production.

APPENDIX IV

(Vide paragraph 10.2)

Statement showing the Country-wise Imports of Machine Screws during 1954-55, 1955-56 and the First Six Months of 1956-57

Serial Num- ber	Name of the country from which machine screws are imported	1954 April to 1955 March			1955 April to 1956 March			1956 April to 1956 September		
		Quantity		Value	Quantity		Value	Quantity		Value
		Tons	Gross	Rupees	Tons	Gross	Rupees	Tons	Gross	Rupees
1	Belgium	12	32,228	21,780	15	21,912	20,264	..	4,104	8,402
2	Japan	78	99,074	94,874	66	77,602	91,831	50	73,488	79,348
3	Netherlands	50	1,40,191	95,324	5	36,192	51,413	2	10,495	38,228
4	Sweden	30	35,307	47,202	13	18,725	27,724	4	6,546	13,548
5	U. K.	24	74,672	1,24,963	75	1,28,998	2,89,651	44	80,113	1,03,270
6	U. S. A.	2	5,005	25,781	9	8,940	56,900	6	21,529	29,938
7	Western Germany	34	45,766	56,440	28	21,304	64,551	30	24,155	36,182
8	Other countries	..	5	1,115	..	373	1,808	4	3,594	11,120
TOTAL		230	4,32,248	4,67,479	211	3,14,046	6,04,142	140	2,24,024	3,21,036

APPENDIX V

(Vide paragraph 13)

Statement showing the c.i.f. prices, customs duty, clearing charges and landed cost of the protected categories of machine screws

(Price per gross)

Source of information	Origin of import	Date of import	Type and specifications	C. i. f. prices	Customs duty	Clearing charges	Landed cost	Remarks
1	2	3	4	5	6	7	8	9
Size								
Round Head								
The Collector of Customs, Bombay	U.K.	20-4-57	1½" × ½"	Rs. 2 7 0	Rs. 1 3 6	Rs. 0 3 0	Rs. 3 13 6	
			2" × ½"	Rs. 2 15 0	Rs. 1 7 6	Rs. 0 3 6	Rs. 4 10 0	
			2½" × ½"	Rs. 3 3 0	Rs. 1 9 6	Rs. 0 4 0	Rs. 5 0 6	
			1" × 5/16"	Rs. 2 6 0	Rs. 1 3 0	Rs. 0 3 0	Rs. 3 12 0	
			2" × 5/16"	Rs. 3 13 0	Rs. 1 14 6	Rs. 0 4 6	Rs. 6 0 0	
Ditto	Japan	9-4-57	½" × ½"	Rs. 0 3 0	Rs. 0 9 0	Rs. 0 0 6	Rs. 0 12 6	
			¾" × ¾"	Rs. 0 3 0	Rs. 0 9 0	Rs. 0 0 6	Rs. 0 12 6	
			1" × 1"	Rs. 0 8 0	Rs. 0 9 0	Rs. 0 1 0	Rs. 1 2 0	
			1½" × 1½"	Rs. 3 12 0	Rs. 1 14 0	Rs. 0 4 0	Rs. 5 14 0	
Ditto	Austria	23-4-57	¾" × ¾"	Rs. 4 3 0	Rs. 2 1 6	Rs. 0 4 6	Rs. 6 9 0	
			1" × 1"	Rs. 4 10 0	Rs. 2 5 0	Rs. 0 6 0	Rs. 7 5 0	

$\frac{3}{8}'' \times 1\frac{1}{4}''$	5	0	0	2	8	0	0	6	0	7	14	0
$\frac{3}{8}'' \times 1\frac{1}{2}''$	5	8	0	2	12	0	0	6	0	8	10	0
$\frac{3}{8}'' \times 2''$	6	11	0	3	5	6	0	7	6	10	8	0
$\frac{3}{8}'' \times 2\frac{1}{2}''$	8	0	0	4	0	0	0	10	0	12	10	0
$\frac{3}{8}'' \times 3''$	10	0	0	5	0	0	0	12	0	15	12	0

Round Head

Slotted machine screw B.A. threading

The Collector of Customs, Calcutta

. U.K.

. April 57

Size

$\frac{1}{4}'' \times 4''$	0	10	6	0	9	0	0	0	6	1	4	0
$\frac{3}{8}'' \times 4''$	0	11	3	0	9	0	0	0	6	1	4	9
$\frac{3}{8}'' \times 4''$	0	14	6	0	9	0	0	0	6	1	8	0
$\frac{1}{2}'' \times 5''$	0	11	3	0	9	0	0	0	6	1	4	9
$\frac{3}{8}'' \times 5''$	0	12	9	0	9	0	0	0	6	1	6	3
$1'' \times 5''$	0	14	6	0	9	0	0	0	6	1	8	0

Flat Head

The Collector of Customs, Bombay

. Austria

23-4-57

Size

$5/16'' \times 2\frac{1}{2}''$	6	6	0	3	0	0	0	7	0	9	7	0
$5/16'' \times 3''$	7	12	0	3	14	0	0	10	0	12	4	0
$\frac{3}{8}'' \times 1\frac{1}{4}''$	5	0	0	2	8	0	0	6	0	7	14	0
$\frac{3}{8}'' \times 1\frac{1}{2}''$	5	8	0	2	12	0	0	6	0	8	10	0
$\frac{3}{8}'' \times 1\frac{3}{4}''$	6	2	0	3	1	0	0	7	0	9	10	0
$\frac{3}{8}'' \times 2''$	6	11	0	3	5	6	0	7	6	10	8	0
$\frac{3}{8}'' \times 2\frac{1}{2}''$	8	0	0	4	0	0	0	10	0	12	10	0
$\frac{3}{8}'' \times 3''$	10	0	0	5	0	0	0	12	0	15	12	0

1 2 3 4 5 6 7 8 9

C.S.K. Head

The Collector of Customs, Bombay	U.K.	20-4-57	Rs. as, p.	Rs. as, p.	Rs. as, p.	Rs. as, p.	Rs. as, p.	Rs. as, p.
			0 15 0	0 9 0	0 1 3	1 9 3		
$\frac{3}{8}'' \times 2''$			1 1 0	0 9 0	0 1 3	1 10 3		
$\frac{3}{4}'' \times 2''$			0 12 0	0 9 0	0 1 0	1 6 0		
$\frac{3}{8}'' \times 3''$			0 12 0	0 9 0	0 1 0	1 6 0		
$\frac{1}{2}'' \times 4''$			0 14 0	0 9 0	0 1 0	1 8 0		
$\frac{3}{4}'' \times 4''$			0 15 0	0 9 0	0 1 3	1 9 3		
$1'' \times 4''$			0 10 0	0 9 0	0 0 9	1 3 9		
$\frac{3}{8}'' \times 6''$			0 9 0	0 9 0	0 0 6	1 2 0		
$1'' \times 6''$			0 12 0	0 9 0	0 1 0	1 6 0		
$\frac{3}{4}'' \times 6''$			0 14 0	0 9 0	0 1 0	1 8 0		
$1'' \times 6''$			0 10 0	0 9 0	0 0 9	1 3 9		
$\frac{3}{8}'' \times 6''$			2 15 0	1 7 6	0 3 6	4 10 0		
$2'' \times 1\frac{1}{4}''$			3 13 0	1 14 6	0 4 6	6 0 0		
$2\frac{1}{2}'' \times 1\frac{1}{4}''$			2 2 0	1 1 0	0 2 6	3 5 6		
$\frac{3}{4}'' \times 5/16''$			3 6 0	1 3 0	0 3 0	3 12 0		
$1'' \times 5/16''$			3 13 0	1 14 6	0 4 6	6 0 0		
$2'' \times 5/16''$			4 4 0	2 2 0	0 5 0	6 11 0		
$2\frac{1}{4}'' \times 5/16''$								



Ditto	Japan .	9-4-57	5/32" × 2 1/2"	1	5	0	0	10	6	0	1	6	2	1	0
			3/16" × 3"	1	8	0	0	12	0	0	2	0	2	6	0
			1" × 2 1/2"	2	3	0	1	1	6	0	2	6	3	7	0
			1" × 3"	2	11	0	1	5	6	0	3	0	4	3	6
			1" × 3 1/2"	3	6	0	1	11	0	0	4	0	5	5	0
			1" × 4"	4	2	0	2	1	0	0	5	0	6	8	0

Cheese Head

The Collector of Customs, Bombay	Sweden .	22-4-57	3/8" × 1 1/8"	0	9	0	0	9	0	0	0	6	1	2	6
			1" × 1 1/8"	0	10	0	0	9	0	0	0	6	1	3	6
			1" × 1 3/8"	0	12	0	0	9	0	0	0	9	1	5	6
			1" × 5/32"	0	10	0	0	9	0	0	0	6	1	3	6
			3/8" × 5/32"	0	10	6	0	9	0	0	0	6	1	4	0
			3/4" × 5/32"	0	12	0	0	9	0	0	0	9	1	5	6
			2" × 5/32"	1	8	0	0	12	0	0	2	0	2	6	0
			3/8" × 3/16"	0	12	6	0	9	0	0	0	9	1	6	3
			1" × 3/16"	0	14	0	0	9	0	0	0	9	1	7	9
			5/8" × 3/16"	0	14	6	0	9	0	0	0	9	1	8	3
			3/4" × 3/16"	0	15	6	0	9	0	0	0	9	1	9	3
			1" × 3/16"	1	0	9	0	9	0	0	0	9	1	10	6
			1" × 1"	1	4	0	0	10	0	0	1	6	1	15	6
			1 1/4" × 1"	1	15	0	0	15	6	0	2	3	3	0	9

1	2	3	4	5	6	7	8	9
The Collector to Customs,	Bombay .	Sweden	22-4-57	Rs. a. p.	Rs a. p.	Rs. a. p.	Rs. a. p.	
			$\frac{1}{2}'' \times \frac{1}{4}''$	1 6 0	0 11 0	0 1 6	2 2 6	
			$2'' \times \frac{1}{4}''$	2 9 0	1 4 6	0 3 0	4 0 6	
			$1'' \times \frac{3}{8}''$	2 9 6	1 4 9	0 3 0	4 1 3	
			$\frac{5}{8}'' \times \frac{3}{8}''$	2 14 0	1 7 0	0 4 0	4 9 0	
			$\frac{1}{2}'' \times \frac{3}{8}''$	3 0 0	1 8 0	0 4 6	4 12 6	
			$1\frac{1}{2}'' \times \frac{3}{8}''$	4 0 0	2 0 0	0 15 0	6 5 0	
			$2'' \times \frac{3}{8}''$	5 8 0	2 12 0	0 6 0	8 10 0	
			$2\frac{1}{2}'' \times \frac{3}{8}''$	5 12 0	2 14 0	0 6 6	9 0 6	
			$3'' \times \frac{3}{8}''$	6 7 0	3 3 6	0 7 0	10 1 6	
			$\frac{1}{2}'' \times 5/16''$	1 15 0	0 15 6	0 1 6	3 0 0	
			$1 \times \frac{3}{8}''$	3 5 0	1 10 6	0 4 6	5 4 0	
			$1'' \times \frac{1}{4}''$	1 9 0	0 12 6	0 2 0	2 7 6	
			$\frac{5}{8}'' \times \frac{1}{4}''$	1 5 0	0 10 6	0 1 6	2 1 0	
			$\frac{1}{2}'' \times 5/32''$	0 12 0	0 9 0	0 1 0	1 6 0	
			$2\frac{1}{2} \times \frac{1}{4}''$	3 0 0	1 8 0	0 4 0	4 12 0	
			$4'' \times \frac{1}{4}''$	7 4 0	3 10 0	0 9 0	11 7 0	
			$3'' \times 5/16''$	5 2 0	2 9 0	0 6 0	8 1 0	
			$1\frac{3}{8}'' \times \frac{3}{8}''$	3 12 0	1 14 0	0 5 0	5 15 0	
			$1\frac{1}{2}'' \times \frac{3}{8}''$	3 6 0	1 11 0	0 4 0	5 5 0	
			$2\frac{1}{2}'' \times 3/16''$	2 0 0	1 0 0	0 2 0	3 2 0	
			$3'' \times \frac{3}{8}''$	6 8 0	3 4 0	0 8 0	10 4 0	

Ditto	.	.	.	.	U.K.	20-4-57	$1\frac{1}{2}" \times 5/16"$	1	9	0	0	12	6	0	2	6	2	8	0
							$2\frac{1}{2}" \times 5/16"$	3	11	0	1	13	6	0	4	6	5	13	0
							$1\frac{1}{2}" \times 2"$	1	2	6	0	9	3	0	1	3	1	13	0
							$3\frac{1}{2}" \times 2"$	1	5	6	0	10	9	0	1	3	2	1	6
							$2" \times 2"$	2	2	6	1	3	3	0	2	9	3	8	6
							$3" \times 3"$	1	0	0	0	9	0	0	1	3	1	10	3
							$2" \times 4"$	1	13	0	0	14	6	0	2	0	2	13	6
							$1" \times 4"$	0	12	0	0	9	0	0	1	0	1	6	0
							$1\frac{1}{2}" \times 5/16"$	2	4	6	1	2	3	0	2	9	3	9	6
							$3\frac{1}{2}" \times 5/16"$	2	8	6	1	4	3	0	3	0	3	10	9
							$1" \times 5/16"$	2	11	0	1	5	6	0	3	0	4	3	6
Steel Cheese head scotted machine screws B.A. threading																			
The Collector of Customs, Calcutta	.	.	.	.	U.K.	April, 57	$1\frac{1}{2}" \times 4"$	0	12	0	0	9	0	0	0	6	1	5	6
							$3\frac{1}{2}" \times 4"$	0	12	9	0	9	0	0	0	6	1	6	3
							$4\frac{1}{2}" \times 4"$	0	15	3	0	9	0	0	0	6	1	8	9
							$2" \times 4"$	1	13	0	0	14	0	0	0	6	2	12	0
							$1" \times 5"$	0	12	9	0	9	0	0	0	6	1	6	3
							$4\frac{1}{2}" \times 5"$	0	14	6	0	9	0	0	0	6	1	8	0
							$1" \times 5"$	1	0	9	0	9	0	0	0	6	1	10	3
							$3/16" \times 6"$	0	10	6	0	9	0	0	0	6	1	4	0
							$3" \times 6"$	0	11	3	0	9	0	0	0	6	1	4	9



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